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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shinichi Kaga

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WENDEROTH, LIND & PONACK, L.L.P.

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WASHINGTON, DC 20006-1021

EXAMINER

COX, ALEXIS K

ART UNIT

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3744

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,467	Applicant(s) KAGA ET AL.	
	Examiner ALEXIS K. COX	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/11/2006, 7/23/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 24-27 are objected to because of the following informalities: the word "higher" in the term "upper limit temperature higher" on line 9 of claim 24 is redundant. On line 6 of claim 25, the term "heat insulated housings" is used. As only the singular form is used previously in the claim on lines 1 and 5, this statement is unclear. For the purpose of examination, the examiner interprets this term to mean "heat insulated housing." Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13-16 and 23 are rejected under 35 U.S.C. 102 (b) as being anticipated by Lee et al (US Patent No. 5,921,095).

Regarding claims 13 and 14, Lee et al discloses refrigeration equipment including a compressor (6, see column 4 line 35), and a condenser, expanding mechanism, and evaporator are inherently present in the closed system of Lee et al. Lee et al further discloses a control means (16, 17, see column 5 line 50; see also figure 6) storing a plurality of refrigerating specifications (see column 6 lines 16-24) and operating the refrigerating equipment according to the specifications stored.

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Regarding claims 15 and 16, Lee et al discloses a refrigerating storage cabinet including a heat insulating housing (5, see column 1 lines 42-45; 12, see column 4 lines 51-52 and column 5 lines 12-14), a compressor (6, see column 4 line 35), and a condenser, expanding mechanism, and evaporator are inherently present in the closed system of Lee et al. Lee et al further discloses a control means (16, 17, see column 5 line 50; see also figure 6) storing a plurality of refrigerating specifications (see column 6 lines 16-24) and operating the refrigerating equipment according to the specifications stored.

Regarding claim 23, Lee et al discloses the plurality of refrigerating specifications to include a refrigerating specification for refrigeration and a refrigerating specification for freezing (see column 5 line 51).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US Patent No. 5,921,095).

Regarding claim 24, it is noted that Lee et al does not explicitly state the refrigerating unit to perform a pull down cooling when an internal temperature is higher than an upper limit temperature until the internal temperature drops to the upper limit temperature; the refrigerating unit to perform a control refrigeration when the internal temperature is at the upper limit temperature until the internal temperature drops to a lower limit temperature, after which the refrigerating unit is stopped, allowing the internal temperature to rise; the control refrigeration to be repeated maintaining the internal temperature about the predetermined temperature; at least one of a plurality of pull down cooling characteristics or a plurality of control refrigeration characteristics are provided for controlling the refrigeration unit during the respective pull down cooling and control refrigeration; an appropriate one of the pull down characteristics is selected based upon conditions of the refrigerating storage cabinet; and an appropriate one of

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the control refrigeration characteristics is selected based upon the conditions of the refrigerating storage cabinet. However, the system of Lee et al is capable of performing the steps, as it contains both a microprocessor (16, 17, see column 5 line 50; see also figure 6) storing a plurality of refrigeration specifications and a compressor. Further, the general concept of programming a microprocessor to perform pull down cooling when an internal temperature is higher than an upper limit temperature until the internal temperature drops to the upper limit temperature, control refrigeration when the internal temperature is at the upper limit temperature until the internal temperature drops to a lower limit temperature, and then stop, falls within the realm of common knowledge as an obvious mechanical expedient and would have been obvious to one of ordinary skill in the art at the time of the invention to program in order to have a simple but energy efficient program.

8. Claims 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US Patent No. 5,921,095) in view of Valence et al (US Patent No. 5,600,966).

Regarding claim 17, it is noted that Lee et al does not explicitly disclose the presence of a condensation-preventing heater with variable heating performance located about an opening of the heat insulated housing or a switching device provided to switch the variable heating performance of the heater to correspond to the appropriate one of the plurality of refrigerating specifications. However, Valence et al discloses the presence of a condensation-preventing heater (46, see column 3 lines 38-43) with variable heating performance (46, 48, see column 4 lines 44-47) and located about an opening of the heat insulated housing, and the control unit of Lee et al (16, 17,

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see column 5 line 50; see also figure 6) is capable of controlling the heating element of Valence. Further, as the function and structure of Lee et al and Valence et al are similar, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the condensation preventing heater of Valence et al in the system of Lee et al to prevent excess condensation, as stated in column 3 line 43 of Valence et al.

Regarding claim 18, Lee et al discloses an identifying means (see column 6 lines 4-16; see also figures 11 and 12) for identifying the refrigerating specification of the heat insulating housing to which the refrigeration unit is detachably attached (14, 15, see column 5 lines 41-48), and the control means selects and executes the appropriate one of the plurality of refrigerating specifications based on an identification signal from the identifying means (see column 6 lines 4-24).

Regarding claims 19, 25, and 26, the identifying means of Lee et al includes a detecting portion (microcontroller 16) provided on one of the refrigeration unit or the heat insulating housing, and a detected portion (switches 40, see column 6 lines 4-15) provided on an other of the heat insulated housing or the refrigeration unit, wherein an interaction between the detecting portion and the detected portion determines the identification signal (see column 6 lines 4-15; see also figure 12).

Regarding claim 20, Lee et al discloses the refrigerating storage cabinet to comprise a set internal temperature input section for inputting a set internal temperature for the heat-insulating housing (16, 17, see column 5 line 50; see also figure 6) wherein the identifying means determines the appropriate one of the plurality of refrigerating specifications based on the set internal temperature (see column 6 lines 16-24).

Regarding claim 21, Lee et al discloses a signal recording section (40, see column 6 line 11) provided with a heat insulating housing for storing an identification signal for selecting the appropriate one of the plurality of refrigerating specifications, and a reading section (31, see column 6 line 12) capable of reading the identification signal of the signal recording section and communicating the identification signal to the control means (see column 6 lines 13-15).

Regarding claim 22, Lee et al discloses an information recording section storing supplemental information (31, 16, see column 6 lines 29-31 and 16-24) and an information conveying means for reading and communicating the supplementary information to the control means, and the supplementary information includes at least one of a size of the heat insulating housing or a heat invasion amount characteristic, as the temperature change of the interior space over time is a heat invasion amount characteristic (see column 6 lines 16-24).

Regarding claim 27, Lee et al discloses the plurality of refrigerating specifications to include a refrigerating specification for refrigeration and a refrigerating specification for freezing (see column 5 line 51).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lauderback (US Patent No. 1,934,133) discloses means for preventing frosting or condensation of moisture on glass or other surfaces by heating an area near an opening a housing. Colvin (US Patent No. 2,443,342) discloses a means for preventing condensation. Barton et al (US Patent No. 3,895,500) discloses means

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for preventing condensation by application of heat near the entrance of the housing using a heater designed to be put in place by the owner. Lehmann (US Patent No. 2,529,734) discloses the defrosting of a refrigerated locker bank. Lieberman (US Patent No. 3,650,122) discloses a modular refrigeration unit to be installed in a cabinet housing. Yoon et al (US Patent Application Publication No. 2004/0035142) discloses a sectional refrigerator. And Jondahl (US Patent No. 4,895,001) discloses an expandable refrigeration system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXIS K. COX whose telephone number is (571)270-5530. The examiner can normally be reached on Monday through Thursday 8:00a.m. to 5:30p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on 571-272-4834 or 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AKC/

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744